



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
30.07.2014 Bulletin 2014/31

(51) Int Cl.:
H04N 1/409 (2006.01)

(43) Date of publication A2:
25.07.2012 Bulletin 2012/30

(21) Application number: **12151413.7**

(22) Date of filing: **17.01.2012**

(84) Designated Contracting States:
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
Designated Extension States:
BA ME

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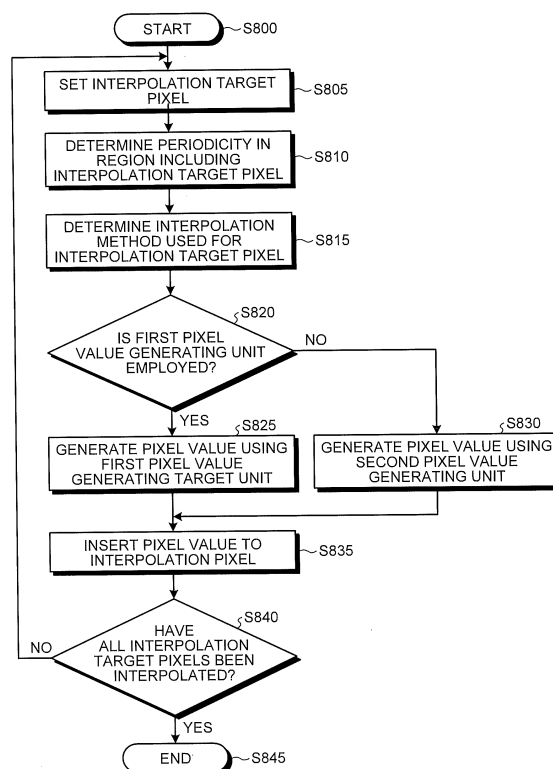
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(30) Priority: **21.01.2011 JP 2011010762**

(54) **Image processing apparatus and pixel interpolation method**

(57) An image processing apparatus includes a periodicity determining unit configured to determine whether an image region including a target pixel whose pixel value is to be interpolated is a periodic region in which pixel values vary periodically; a first pixel value generating unit configured to generate a pixel value of a pixel using a first interpolation method; a second pixel value generating unit configured to generate a pixel value of a pixel using a second interpolation method different from the first interpolation method; a control unit configured to determine, based on the determination result obtained by the periodicity determining unit, which one of the first and second pixel value generating units is to be used for generating the pixel value of the target pixel; and a pixel value inserting unit configured to insert, to the target pixel, the pixel value generated by one of the first and second pixel value generating units determined by the control unit. The periodicity determining unit includes at least one of: a cycle estimating unit configured to estimate, using pixel values of respective pixels within the image region including the target pixel, a variation cycle of the pixel values; and a partial region periodicity determining unit configured to determine whether each of regions positioned at left and right sides of the target pixel is the periodic region. At least one of the first and second pixel value generating units generates the pixel value of the target pixel using at least one of the variation cycle of the pixel values estimated by the cycle estimating unit and the determination result determined by the partial region periodicity determining unit.

FIG.8





EUROPEAN SEARCH REPORT

Application Number
EP 12 15 1413

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
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			TECHNICAL FIELDS SEARCHED (IPC)
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The present search report has been drawn up for all claims			
Place of search		Date of completion of the search	Examiner
The Hague		13 June 2014	Winne, Dominique
CATEGORY OF CITED DOCUMENTS			
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
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13-06-2014

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